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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/669,954	09/23/2003	Anand P. Narayan	TCOM0007	4754
39258 TENSORCOMI	7590 07/23/200 M, INC.	EXAMINER		
c/o iSherpa Capital			TRAN, KHAI	
6400 S. Fiddler"s Green Circle, Suite 650 Greenwood Village, CO 80111		550	ART UNIT	PAPER NUMBER
			2611	
			MAIL DATE	DELIVERY MODE
			07/23/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	Applicant(s)		
	10/669,954	NARAYAN ET AL.		
Office Action Summary	Examiner	Art Unit		
	KHAI TRAN	2611		
The MAILING DATE of this communication app Period for Reply	ears on the cover sheet with the c	orrespondence address		
A SHORTENED STATUTORY PERIOD FOR REPLY WHICHEVER IS LONGER, FROM THE MAILING DA  - Extensions of time may be available under the provisions of 37 CFR 1.13 after SIX (6) MONTHS from the mailing date of this communication.  - If NO period for reply is specified above, the maximum statutory period w.  - Failure to reply within the set or extended period for reply will, by statute, Any reply received by the Office later than three months after the mailing earned patent term adjustment. See 37 CFR 1.704(b).	ATE OF THIS COMMUNICATION 36(a). In no event, however, may a reply be tim vill apply and will expire SIX (6) MONTHS from cause the application to become ABANDONE	N. nely filed the mailing date of this communication. D (35 U.S.C. § 133).		
Status				
1) ☐ Responsive to communication(s) filed on 21 Ag 2a) ☐ This action is <b>FINAL</b> . 2b) ☐ This 3) ☐ Since this application is in condition for allowar closed in accordance with the practice under E	action is non-final. nce except for formal matters, pro			
Disposition of Claims				
4) Claim(s) 1-13,26-38,57-59,61-74 and 80-85 is/a 4a) Of the above claim(s) is/are withdrav 5) Claim(s) 65-74 and 80-85 is/are allowed. 6) Claim(s) 1,5-8,13,26,57-59,61 and 62 is/are rej 7) Claim(s) 2-4,9-12,27-38,63 and 64 is/are object 8) Claim(s) are subject to restriction and/or Application Papers 9) The specification is objected to by the Examine	vn from consideration.  jected. ted to. r election requirement.			
10) The drawing(s) filed on is/are: a) access applicant may not request that any objection to the confidence of Replacement drawing sheet(s) including the correction in the confidence of	epted or b) objected to by the Edrawing(s) be held in abeyance. See on is required if the drawing(s) is obj	e 37 CFR 1.85(a). lected to. See 37 CFR 1.121(d).		
Priority under 35 U.S.C. § 119				
<ul> <li>12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).</li> <li>a) All b) Some * c) None of:</li> <li>1. Certified copies of the priority documents have been received.</li> <li>2. Certified copies of the priority documents have been received in Application No.</li> <li>3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).</li> <li>* See the attached detailed Office action for a list of the certified copies not received.</li> </ul>				
Attachment(s)  1) Notice of References Cited (PTO-892)  2) Notice of Draftsperson's Patent Drawing Review (PTO-948)  3) Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date 1/27/09.	4)  Interview Summary Paper No(s)/Mail Da 5)  Notice of Informal P 6)  Other:	nte		

Application/Control Number: 10/669,954 Page 2

Art Unit: 2611

## **DETAILED ACTION**

1. The amendment filed 4/21/2009 has been entered. Claims 1-13, 26-38, 57-59, 61-74, and 80-85 are pending in this Office action.

# Claim Rejections - 35 USC § 103

- 2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:
  - (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.
- 3. Claims 1, 5-8, 13, 26, 59, and 61-62 are rejected under 35 U.S.C. 103(a) as being unpatentable over Li et al (U.S. Pat. 7,194,051) in view of Karabinis et al (US 2003/0054814).

Regarding claim 1, Li et al disclose a method for selectively enabling signal interference cancellation, comprising: identifying a plurality of signal paths; for a set of the identified signal paths, determining an observed signal strength (col. 3, line 65 to col. 4, line 49); Li et al fail to discloses to identify at least one of the signal paths as a potential interferer based at least in part on the observed signal strength; and creating at least a first interference cancelled signal stream.

Karabinis et al disclose identifying at least one of the signal paths as a potential interferer based at least in part on the observed signal strength (see [0039]); least a first interference cancelled signal stream (an interference reducer 170a used to cancel interference from the at least one potential interference, see [0041], [0042]). It would have been obvious tone having ordinary skill in the art at the time the invention was

made to cancel the potential interference based at least in part on the signal strength as taught Karabinis et al into the teachings of Li et al in order to reduce interference from the wireless radiation by ancillary terrestrial network.

Regarding claim 5, Li et al also disclose wherein said set of identified signal paths comprises a set of assigned signal paths (col. 4, lines 10-21).

Regarding claim 6, Li et al disclose wherein said set of assigned signal paths is obtained from a demodulation path list (from a demodulation finger 220).

Regarding claim 7, Karabinis et al disclose wherein said identifying a plurality of potential interferers comprises identifying a first number of signal paths having at least a first signal strength (see [0085], [0086]).

Regarding claim 8, Karabinis et al disclose listing said potential interferers in a cancellation candidate list (see [0011]).

Regarding claim 13, Karabinis et al disclose storing an identity of said at least a first interference cancelled signal (see [0011]).

Regarding claim 26, Li et al disclose establishing a connection between a demodulating finger and one of a raw signal stream and an interference cancelled signal stream based on an entry in said cancellation list (a connection between the demodulation elements 220 and the raw signal (samples) ass shown in Figure 2). Li et al fail to disclose populating a cancellation list with an identity of at least a first signal path that has been identified as an interfering signal path.

Karabinis et al disclose populating a cancellation list with an identity of at least a first signal path that has been identified as an interfering signal path (see [0011],

Art Unit: 2611

[0014]). It would have been obvious to one having ordinary skill in the art at the time the invention was made to populate a cancellation list with an identity of at least a first signal path that has been identified as an interfering signal path as taught by Karabinis et al into the teachings of Li et al for the purpose of minimizing the level of interference from the terrestrial operations into the satellite operations.

Claim 59 is similar to claim 1. Therefore, claim 59 is rejected under a similar rationale.

Claims 61-62 are similar to claim 1. Therefore, claims 61-62 are rejected under a similar rationale.

### Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 57-58 are rejected under 35 U.S.C. 102(e) as being anticipated by Li et al (U.S. Pat. 7,194,051).

Regarding claim 57, Li et al disclose a set of data structures for use in identifying a potentially interfering signal path as shown in Figure 2, comprising: a demodulating finger identifier (a demodulation element (Finger) 220); a signal path assigned to each

Application/Control Number: 10/669,954 Page 5

Art Unit: 2611

demodulating finger identifier (see Figure 2); and a signal strength associated with each signal path (a received strength indicator (RSS) 254).

Regarding claim 58, Li et al disclose a sector associated with each signal path (see Figure 2).

### Allowable Subject Matter

- 6. Claims 2-4, 9-12, 27-38, 63-64 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
- 7. Claims 65-68, 69-72, 73-74, and 80-85 are allowed.
- 8. The following is a statement of reasons for the indication of allowable subject matter: Li et al and Karabinis et al fail to disclose a receiver configured for processing a raw signal stream, comprising: a cancellation controller operable to selectively provide either or both of the raw signal stream and at least one interference cancelled signal stream to the plurality of demodulation fingers; and at least one cancellation module configured with the cancellation controller and operable to remove at least one replica of an interfering signal path from the raw signal stream to generate one of the at least one interference cancelled signal streams.

#### Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to KHAI TRAN whose telephone number is (571) 272-3019. The examiner can normally be reached on 7:00AM - 4:30PM.

Application/Control Number: 10/669,954 Page 6

Art Unit: 2611

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Payne can be reached on (571) 272-3024. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/KHAI TRAN/ Primary Examiner, Art Unit 2611 July 16, 2009